Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application. Please amend misnumbered claims 2-25 as follows:

Listing of Claims:

1. (Original) A device for manipulating particles using dielectrophoresis, the device comprising:

a substrate;

an insulating ridge on the substrate;

a plurality of electrodes positioned to generate a spatially non-uniform electric field across the insulating ridge.

- 2. (Original) A device according to claim 1, further comprising a plurality of the insulating ridges.
- 2<u>3</u>. (Currently Amended) A device according to claim 1, wherein the substrate comprises glass.
- 34. (Currently Amended) A device according to claim 1, wherein the substrate comprises a polymer.
- 4<u>5</u>. (Currently Amended) A device according to claim 1, wherein the insulating ridges comprise an insulating material supported by a non-insulating material.
- 56. (Currently Amended) A device according to claim 1, further comprising a voltage source connected to the plurality of electrodes.
- 67. (Currently Amended) A device according to claim 1, wherein the plurality of ridges on the substrate define a surface of a first fluid channel.
- 78. (Currently Amended) A device according to claim 67, further comprising a fluid port connected to the first channel.

- 89. (Currently Amended) A device according to claim 67, further comprising a second fluid channel connected to the first fluid channel.
- 910. (Currently Amended) A device according to claim 1, wherein the plurality of ridges are each at an angle of between 20 and 80 degrees relative to a direction of fluid flow.
- 1011. (Currently Amended) A device according to claim 1, wherein the plurality of ridges are each at an angle of about 45 degrees relative to a direction of fluid flow.
- 1112. (Currently Amended) A device according to claim 1, wherein the plurality of ridges includes a first ridge and a second ridge, said first and second ridges being positioned at different angles relative to a direction of fluid flow.
- 1213. (Currently Amended) A device according to claim 1, wherein at least one ridge of the plurality of ridges is curved toward a concentration area.
- 1314. (Currently Amended) A device according to claim 1, wherein the plurality of ridges are curved toward a concentration area.
- 14<u>15</u>. (Currently Amended) A device according to claim 9<u>10</u>, further comprising:
- a plurality of impedance matching ridges substantially parallel to the direction of fluid flow.
- 1516. (Currently Amended) A device according to claim 1213, further comprising:
- a plurality of impedance matching ridges substantially parallel to a direction of fluid flow.
- 1617. (Currently Amended) A device according to claim 1, wherein the spatially non-uniform electric field generated across the ridges exerts a dielectrophoretic force on at least one of said particles.

- 1718. (Currently Amended) A device according to claim 1617, wherein said particles comprise particles selected from the group of particles consisting of bacteria, cells, and viruses.
- 1819. (Currently Amended) A method for manipulating particles using dielectrophoresis, the method comprising:

generating a spatially non-uniform electric field across an insulating ridge;

passing a sample fluid containing the particles across the insulating ridge, the
spatially non-uniform electric field exerting a dielectrophoretic force on the particles thereby
constraining motion of at least one particle; and

transporting at least the constrained particle along the ridge.

- 1920. (Currently Amended) A method according to claim 1819, wherein the act of transporting the particle comprises electrokinetic transport.
- 2021. (Currently Amended) A method according to claim 1819, wherein the act of transporting the particle comprises advection.
- 2122. (Currently Amended) A method according to claim 1819, wherein the act of transporting the particle comprises transporting particles using a gravitational force.
- 2223. (Currently Amended) A method according to claim 1819, wherein the act of contacting the insulating ridge with a sample fluid comprises flowing the sample fluid across the insulating ridge.
- 2324. (Currently Amended) A method according to claim 2223, wherein the insulating ridges are positioned at an angle with respect to the direction of fluid flow.
- 2425. (Currently Amended) A method according to claim 1819, further comprising transporting the particles to a concentration area.
- 2526. (Currently Amended) A method according to claim 1819, further comprising:

generating a spatially non-uniform electric field across a plurality of insulating

ridges including a first ridge and a second ridge, thereby constraining motion of at least a first particle to a region adjacent the first ridge;

changing the spatially non-uniform electric field such that the dielectrophoretic force on the first particle is decreased; and

transporting the first particle to the second ridge.